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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION N
09/743,206	03/15/2002	Dawood Parker		7267

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EXAMINER

KREMER, MATTHEW J

ART UNIT	PAPER NUMBER
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3736

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/743,206

Applicant(s)

PARKER ET-AL.

Examiner

Matthew J Kremer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 33-37, 39 and 41-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 55-58 is/are allowed.
- 6) ☒ Claim(s) 33-37, 41-44 and 46-54 is/are rejected.
- 7) ☒ Claim(s) 39 and 45 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 33-35, 37, and 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,040,539 to Schmitt et al. (Schmitt) in view of U.S. Patent 6,049,727 to Crothall in view of U.S. Patent 6,045,502 to Eppstein et al. (Eppstein). Schmitt teaches a broadband light 10, an emitting bundle 14, a collection bundle 16, and a means for utilizing a non-pulsatile element of blood 80. (Fig. 7 and column 8, line 58 to column 9, line 32 of Schmitt). Schmitt teaches the use of a plurality of detectors with filters. (Fig. 7 of Schmitt). Crothall teaches a plurality of detectors with a grating (Fig. 7 of Crothall) and Eppstein teaches that a detector array with a defraction grating is a suitable substitute for a detector array with a plurality of filters (column 5, lines 6-21 of Eppstein). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the detector array with a grating as disclosed by Crothall since Eppstein teaches that a detector array with defraction grating is a suitable substitute for a detector array with a plurality of filters. In regard to

claim 34, a pulsatile component is utilized. (column 8, line 58 to column 9, line 32 of Schmitt).

3. Claims 33, 36, and 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,064,896 to Rosenthal in view of U.S. Patent 5,040,539 to Schmitt et al. (Schmitt) in view of U.S. Patent 5,040,539 to Schmitt et al. (Schmitt) in view of U.S. Patent 6,049,727 to Crothall in view of U.S. Patent 6,045,502 to Epstein et al. (Epstein). Rosenthal teaches an apparatus and method for determining glucose and temperature. (column 5, line 66 to column 6, line 3 of Rosenthal). Rosenthal does not teach a plurality of transmitting fibers or a plurality of detection fibers. Rosenthal teaches the use of introducing means and detecting means of electromagnetic energy but Rosenthal does not teach the particular form that these elements take. (column 8, lines 19-30 of Rosenthal). Schmitt teaches a broadband light 10, an emitting bundle 14, a collection bundle 16, and a plurality of detectors with filters. (Fig. 7 of Schmitt). Such elements would fulfill the requirements of providing introducing and detecting means of electromagnetic energy as set forth in Rosenthal. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the light and detecting systems of Schmitt in the invention of Rosenthal since Rosenthal teaches the use of introducing and detecting means and Schmitt teaches such means. The combination teaches the use of a plurality of detectors with filters. (Fig. 7 of Schmitt). Crothall teaches a plurality of detectors with a grating (Fig. 7 of Crothall) and Epstein teaches that a detector array with defraction grating is a suitable substitute for

a detector array with a plurality of filters (column 5, lines 6-21 of Eppstein). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the detector array with a grating as disclosed by Crothall since Eppstein teaches that a detector array with a grating is a suitable substitute for a detector array with a plurality of filters. In regard to claim 36, glucose and temperature is determined. (column 5, line 66 to column 6, line 3 of Rosenthal). In regard to claim 43, a digital processor is disclosed for carrying out the signal processing, which inherently means that a computer program is used. In regard to claim 44, a multiple linear regression analysis is used. (column 7, lines 1-7 of Rosenthal).

4. Claims 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,040,539 to Schmitt et al. (Schmitt) in view of U.S. Patent 6,049,727 to Crothall in view of U.S. Patent 6,045,502 to Eppstein et al. (Eppstein) as applied to claim 33, and further in view of U.S. Patent 5,755,226 to Carim et al. (Carim). The combination does not teach the number of fibers in the fiber optic bundles. Carim teaches an optical fiber bundle 326 that has thousands of fibers. (column 15, line 62 to column 16, line 6 of Carim et al.). Such a teaching provides a required number of fibers as required by the combination. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the number of fibers as disclosed by Carim since a number of fibers is required and Carim teaches one such number of fibers. In regard to claims 47-48, Carim et al. shows an optical fiber bundle

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330 that has thousands of fibers in Fig. 4, which means that the light detectors includes at least 12 detector fibers.

5. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,040,539 to Schmitt et al. (Schmitt) in view of U.S. Patent 6,049,727 to Crothall in view of U.S. Patent 6,045,502 to Eppstein et al. (Eppstein) as applied to claim 33, and further in view of U.S. Patent 4,752,115 to Murray, Jr. et al. (Murray). The combination teaches a plurality of emitting and detecting fibers but does not teach a particular diameter for the fibers. Murray teaches a 250-micron diameter fiber that would fulfill the requirements of providing a particular diameter for the fibers as set forth by the combination. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the fibers of Murray in the combination since the combination requires the a particular diameter for the fibers and Murray teaches one such diameters.

6. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,040,539 to Schmitt et al. (Schmitt) in view of U.S. Patent 6,049,727 to Crothall in view of U.S. Patent 6,045,502 to Eppstein et al. (Eppstein) as applied to claim 33, and further in view of U.S. Patent 5,879,294 to Anderson et al. (Anderson). The combination teaches a plurality of emitting and detecting fibers but does not teach that the number of emitting fibers is greater than the number of detecting numbers. Anderson teaches that the number of emitting fibers is directly related to that amount of

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optical penetration of the light, which effects the spectral measurement. (column 10, lines 35-50 of Anderson). This provides a clear suggestion that number of emitting fibers can be modified so that a suitable spectral measurement can be obtained and that the determination of the most appropriate number of emitting fibers by routine experimentation would, therefore, be prima facie obvious to one having ordinary skill in the art.

***Allowable Subject Matter***

7. Claims 55-58 are allowed.
8. Claims 39 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The following is a statement of reasons for the indication of allowable subject matter. In regard to claims 39 and 45, the prior art does not teach or suggest that the apparatus is capable of measuring the hemoglobin index.

***Response to Arguments***

10. Applicant's arguments with respect to claims 33-37, 41-44 and 46-54 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J Kremer whose telephone number is 703-605-0421. The examiner can normally be reached on Mon. through Fri. between 8:30 a.m. - 5:00 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 703-308-3130. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew Kremer  
Assistant Examiner  
Art Unit 3736



ERIC F. WINAKUR  
PRIMARY EXAMINER